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09/662,630	09/15/2000	Takao Miyazaki	0879-0276P	4062

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EXAMINER

JERABEK, KELLY L

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,630

Applicant(s)

MIYAZAKI ET AL.

Examiner

Kelly L. Jerabek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8,9,11-13,16 and 22 is/are rejected.
- 7) ☒ Claim(s) 14-15 and 17-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 3-5, 8-9, and 11-15 have been considered but are moot in view of the new ground(s) of rejection. Amended claims 1 and 8 add the limitation of providing a treadmill **in a floor**, therefore a new ground of rejection is being made.

Claim Objections

Claims 16 and 22 objected to because of the following informalities: Claim 16 recites the limitation "the background image" on page 6, line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the background image" on page 8, line 4. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 16 and 22 rejected under 35 U.S.C. 102(e) as being anticipated by
Tachi et al. US 6,836,286.**

Re claim 16, Tachi discloses in figure 1 a video-conference system (1) including two cylindrical booths (BTA, BTB) capable of producing images in virtual space (VS1) so as to enable the persons (A, B) to feel as if they met together in a room (col. 3, lines 55-61). Each cylindrical booth (BTA, BTB) is a video taking enclosure having a plurality of individual walls (examiner is reading location of each LED matrix (EX) as an individual wall) that accommodate a subject (figure 3). The cylindrical booth (BTA) comprises a plurality of cameras (CM) and a plurality of full-color LED matrixes (EX) (col. 3, line 66 – col. 4, line 4). The video-conference system includes multiplexers (12a, 12b) for selecting linear images (CAL) picked up by the cameras (CM) and image construction units (13a, 13b) for providing final images by displaying the linear images (CAL) on the LED matrixes (EX) (col. 4, lines 50-67). Additionally, Tachi states that the images afforded to the persons (A, B) are dynamic and they are afforded in real time (col. 5, lines 41-45). Therefore, the examiner is reading the LED matrices (EX) as a plurality of projectors, each of which displays a sequence of images (CAL) on one of a

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plurality of wall screens (EX) associated with each individual wall of the video-taking enclosure. The LED matrices (EX) are being read as both projectors and wall screens. Both the cameras (CM) and the LED matrices (EX) revolve around the person (A) (col. 4, lines 5-10). Therefore, it can be seen in figure 3 that each of the video cameras (CM) views a different individual wall screen (EX) of the tooth (BTA). Tachi also states that the LED matrices (EX) display a specific color at the moment when the person (A) is photographed by the cameras (CM) (col. 4, lines 34-36). Therefore, video is taken by each of the cameras (CM) by combining the subject (A) and a background (color displayed on EX) viewed by a given camera.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. US 5,061,061 in view of Silbelus US 5,225,804.

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Re claim 1, Robley discloses in figure 1 a photography system including a studio (10) or "video taking box" that accommodates an actor (21). The studio (10) includes projectors (42,44,46) that project images on projection screens (12,22) of the studio (col. 5, lines 64-68; col. 6, lines 1-16). The projectors (42,44,46) read out and project background images onto the projection screens (12,22) (col. 6, lines 1-29). The camera (14) faces the projection screen (12) and takes an image of an actor (21) and superimposes the image of the actor on the background image formed on the projection screens (12,22) (col. 6, lines 17-40). In addition, Robley states that for scenes requiring coordinated motion between the staged scene and background scene actors can be placed on treadmills (col. 5, lines 4-17). Therefore, it can be seen that the speed of a treadmill and the moving speed of a background image are controlled in order to synchronize (coordinated motion) both of the speeds. Although Robley discloses all of the above limitations he fails to distinctly state that a treadmill is provided in a floor in which the subject is located.

Silbelus discloses in figure 3 a belted roller treadmill modified to serve as a potentiometer. The treadmill (194) is provided in a classroom floor (190) (col. 4, lines 20-36; fig. 3). Therefore, it would have been obvious to include the concept of providing a treadmill in a floor as disclosed by Silbelus in the photography studio including a treadmill as disclosed by Robley. Doing so would provide a means for providing the exposed surfaces of the belted rollers of the treadmill (194) so that they are flush with the floor (190) (Silbelus: col. 4, lines 20-31).

Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus and further in view of Cherry US 3,711,812.

Re claim 3, Robley in view of Silbelus discloses all of the limitations of claim 1 above. Although Robley in view of Silbelus displays the synchronization of treadmill speed and the moving speed to the background image, the combined teaching does not state that the speed of the treadmill and the speed of the background are changed with a remote control operation.

Cherry discloses in figure 1 a treadmill including a control unit (20) for controlling a motor for driving the belt of the treadmill. The control unit (20) may be operated by the patient or may be removed for remote control by an attending physician (col. 3, lines 5-15). Therefore, it would have been obvious to include the treadmill capable of remote control as disclosed by Cherry in the photography studio including a treadmill disclosed by Robley in view of Silbelus. Doing so would provide a means for controlling the speed of a motor for driving the belt of a treadmill using a remote control unit (Cherry: col. 3, lines 5-15).

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus and further in view of Barwacz et al. US 5,986,718.

Re claim 4, Robley in view of Silbelus includes all of the limitations of claim 1 above. Although Robley in view of Silbelus discloses a photography studio for

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superimposing images of an actor with a background image, the combination does not explicitly disclose illumination devices that illuminate the subject and that adjust color temperature and brightness in accordance with the color temperature and brightness of the background image.

Barwacz discloses in figure 3 a photobooth (10) that forms a composite image (fig. 1C) from a subject in the foreground (fig. 1A) and a pre-stored background (fig. 1B) using a chroma-key technique (col. 1, lines 29-67). The photobooth (10) includes illumination lights (80a, 80b, 90a, 90b) that have variable color temperatures in accordance with the color temperature and brightness of the background image (col. 9, lines 13-67) according to a chroma-key technique. Therefore, it would have been obvious to include the illumination devices that have varying color temperature according to the color temperature and brightness of a background image and the chroma-key technique disclosed by Barwacz in the photography studio disclosed by Robley in view of Silbelus. Doing so would provide a means for preventing a foreground subject from appearing transparent in a composite image (Barwacz: col. 9, lines 55-67).

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus and further in view of Honda et al. US 2004/0201764.

Re claim 5, Robley in view of Silbelus includes all of the limitations of claim 1 above. Although Robley in view of Silbelus discloses a photography studio including a

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video camera for superimposing images of an actor with a background image, the combination does not explicitly state that sound is reproduced so as to record the sound with video taking.

Honda discloses in figure 5 a video camera capable of reproducing sound. The video camera includes a microphone (C34) for picking up sound and a speaker (C33) for reproducing the picked up sound (page 5, paragraph 82). Therefore, it would have been obvious to include a video camera including a microphone for recoding sound with video taking as disclosed by Honda in the photography studio including a video camera as disclosed by Robley in view of Silbelus. Doing so would provide a means for picking up sound while recording an image (Honda: page 5, paragraphs 81 – 82).

Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus and further in view of Rodriguez, Jr. US 6,179,426.

Re claim 8, Robley discloses in figure 1 a photography system including a studio (10) or “video taking box” that accommodates an actor (21). The studio (10) includes projectors (42,44,46) that project images on projection screens (12,22) of the studio (col. 5, lines 64-68; col. 6, lines 1-16). The projectors (42,44,46) store, read out and project background images onto the projection screens (12,22) (col. 6, lines 1-29). The camera (14) faces the projection screen (12) and takes an image of an actor (21) and superimposes the image of the actor on the background image formed on the projection screens (12,22) (col. 6, lines 17-40). In addition, Robley states that for scenes requiring

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coordinated motion between the staged scene and background scene actors can be placed on treadmills (col. 5, lines 4-17). Therefore, it can be seen that the speed of a treadmill and the moving speed of a background image are controlled in order to synchronize (coordinated motion) both of the speeds. Although Robley discloses all of the above limitations he fails to distinctly state that a treadmill is provided in a floor in which the subject is located.

Silbelus discloses in figure 3 a belted roller treadmill modified to serve as a potentiometer. The treadmill (194) is provided in a classroom floor (190) (col. 4, lines 20-36; fig. 3). Therefore, it would have been obvious to include the concept of providing a treadmill in a floor as disclosed by Silbelus in the photography studio including a treadmill as disclosed by Robley. Doing so would provide a means for providing the exposed surfaces of the belted rollers of the treadmill (194) so that they are flush with the floor (190) (Silbelus: col. 4, lines 20-31). Although the combination of Robley and Silbelus discloses all of the above limitations, the combination fails to state that the projector displays an image on a screen being a wall of the video taking box.

Rodriguez Jr. discloses in figures 1 and 2 an integrated front projection system. Rodriguez Jr. states that it is well known in the art that images may be projected on a large clear flat surface such as a wall. Therefore, it would have been obvious to include the concept of projecting images onto a wall as disclosed by Rodriguez in the photography studio including a projector as disclosed by Robley in view of Silbelus. Doing so would provide a means for placing a projector in a room that may afford the

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projection volume necessary for image expansion without any physical obstructions (Rodriguez Jr.: col. 2, lines 36-38).

Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus further in view of Rodriguez Jr. and further in view of Honda et al.

Re claim 9, Robley in view of Silbelus and further in view of Rodriguez Jr. includes all of the limitations of claim 8 above. Although Robley in view of Silbelus in view of Rodriguez Jr. discloses a photography studio including a video camera for superimposing images of an actor with a background image, the combination does not explicitly state that studio includes a speaker, an audio storing device, an audio reproducing device, and a recording device with a microphone.

Honda discloses in figure 5 a video camera capable of reproducing sound. The video camera includes a microphone (C34) for picking up sound. The picked-up sound is then processed by a sound processor (C31). Next, the processed signals are transmitted to a recording/reproduction converter (C25), a speaker (C33), and an output port (C32) (page 5, paragraph 82). Therefore, it would have been obvious to include a video camera including a microphone for recoding sound with video taking as disclosed by Honda in the photography studio including a video camera as disclosed by Robley in view of Silbelus in view of Rodriguez Jr. Doing so would provide a means for picking up sound while recording an image (Honda: page 5, paragraphs 81 – 82).

Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus further in view of Rodriguez Jr. and further in view of Cherry.

Re claim 11, Robley in view of Silbelus in view of Rodriguez Jr. includes all of the limitations of claim 8 above. Although Robley in view of Silbelus in view of Rodriguez Jr. displays the synchronization of treadmill speed and the moving speed to the background image, the combined teaching does not state that the speed of the treadmill and the speed of the background are changed with a remote control operation.

Cherry discloses in figure 1 a treadmill including a control unit (20) for controlling a motor for driving the belt of the treadmill. The control unit (20) may be operated by the patient or may be removed for remote control by an attending physician (col. 3, lines 5-15). Therefore, it would have been obvious to include the treadmill capable of remote control as disclosed by Cherry in the photography studio including a treadmill disclosed by Robley in view of Silbelus in view of Rodriguez Jr. Doing so would provide a means for controlling the speed of a motor for driving the belt of a treadmill using a remote control unit (Cherry: col. 3, lines 5-15).

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus further in view of Rodriguez Jr. and further in view of Barwacz et al.

Re claim 11, Robley in view of Silbelus in view of Rodriguez Jr. includes all of the limitations of claim 8 above. Although Robley in view of Silbelus in view of Rodriguez Jr. discloses a photography studio for superimposing images of an actor with a background image, the combination does not explicitly disclose illumination devices that illuminate the subject and that adjust color temperature and brightness in accordance with the color temperature and brightness of the background image.

Barwacz discloses in figure 3 a photobooth (10) that forms a composite image (fig. 1C) from a subject in the foreground (fig. 1A) and a pre-stored background (fig. 1B) using a chroma-key technique (col. 1, lines 29-67). The photobooth (10) includes illumination lights (80a, 80b, 90a, 90b) that have variable color temperatures in accordance with the color temperature and brightness of the background image (col. 9, lines 13-67) according to a chroma-key technique. Therefore, it would have been obvious to include the illumination devices that have varying color temperature according to the color temperature and brightness of a background image and the chroma-key technique disclosed by Barwacz in the photography studio disclosed by Robley in view of Silbelus in view of Rodriguez Jr. Doing so would provide a means for preventing a foreground subject from appearing transparent in a composite image (Barwacz: col. 9, lines 55-67).

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley et al. in view of Silbelus further in view of Rodriguez Jr. and further in view of Bourn et al. US 6,022,124.

Re claim 13, Robley in view of Silbelus in view of Rodriguez Jr. includes all of the limitations of claim 8 above. However, Robley in view of Silbelus in view of Rodriguez Jr. does not state that a ring light encloses the television cameras and serves as an illumination device for illuminating the object.

Bourn discloses in figure 1A a machine-vision illumination system (100) including a camera (140) (col. 6, lines 19-33). The camera (140) views an object (160) through an opening in a ring-reflector illumination source (200) (col. 6, lines 27-33). Thus, the ring-reflector illumination source (200) encloses the camera. The ring-reflector illumination source (200) of the machine-vision illumination system (100) serves to reduce shadows of the object (col. 17, lines 8-17). Therefore, it would have been obvious to include the ring-reflector illumination source (200) of the machine-vision illumination system (100) disclosed by Bourn in the photography studio disclosed by Robley in view of Silbelus in view of Rodriguez Jr. Doing so would provide a means for generating a light source from more than one point source with suitable brightness in order to reduce shadows (Bourn: col. 17, lines 8-12).

Allowable Subject Matter

Claims 14-15 and 17-21 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the following technical features as recited in the highlighted claims:

Re claims 14 and 15, the prior art fails to teach or suggest, "...wherein the entire wall of said video taking box is the screen, and a plurality of pairs of video cameras and illumination devices are built in said screen".

Re claim 17, the prior art fails to teach or suggest, "...wherein the video is taken by a camera having a straight line of sight to a projector".

Re claim 18, the prior art fails to teach or suggest, "...wherein the plurality of projectors do not directly illuminate the subject".

Re claims 19-20, the prior art fails to teach or suggest, "...selecting from at least one of the plurality of video cameras to take the video, wherein each of the plurality of cameras directly views the subject and one of a plurality of screens".

Re claim 21, the prior art fails to teach or suggest, "...displaying a plurality of movies on the plurality of screens, wherein each one of the plurality of movies is separately displayed on each screen of the plurality of screens, and further wherein the plurality of screens surround the subject".

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Latypov (US 6,624,853) discloses a method and system for creating video programs with interaction of an actor with objects of a virtual space and the objects to one another. The information regarding superimposing an image of an actor with an image of virtual space is relevant material.

Pryor (US 6,766,036) discloses camera based man machine interfaces. The information regarding a sports game with a user walking on a treadmill is relevant material.

McDowall et al. (US 6,535,241) discloses a multi-person stereo display system. The information regarding projecting images onto a wall of a room is relevant material.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is 703-305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for

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submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at 703-746-3059.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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